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15.

ANÆSTHETIC INHALATION.

RIVAL CLAIMANTS TO THE DISCOVERY.

DR. LONG'S CLAIM CRITICISED—THE PRIORITY OF DR. MORTON'S ANNOUNCEMENT MAINTAINED.

To the Editor of the New York Times :

Probably no great discovery or invention has been quietly ceded to its author. Its promulgation by the discoverer and acceptance by scientific and popular tribunals have been the signal for the ravages of the well-known "after-crop" of claimants. It has been humorously said "that if a man were to show that he had found a road to the moon, his neighbors would testify that if they had not been there themselves they knew several individuals who were familiar with the road in question."

The discoverer of anaesthesia has not escaped in this respect the fate of other discoverers. The claimants, whose names are now known in connection with the discovery, all without exception laid their first public claim to it only after Dr. Morton, in 1846, had announced and established painless surgery. The world has always looked with suspicion upon such *ex post facto* discoverers. It honors not them, but the man who announces, demonstrates, and compels acceptance, and its judgment has been seldom if ever reversed. Two late issues of your valuable journal contain articles which indicate that an effort is being made to bring forward still another *ex post facto* claimant, in the shape of Dr. Long, of Georgia. A pamphlet written by Dr. J. Marion Sims, and "just issued," forms the basis of most of the statements made. To allude in the briefest manner to the numerous misstatements and perversions of truth contained in the pamphlet from which your information is extracted would be beyond the scope of this communication. Will you, however, kindly grant me space for a few simple comments in two directions :

First—The fallacious chronological arrangement which Dr. Sims has worked up into a "history of anaesthesia." He recites the dates of the experiments of a certain number of recent claimants, affects to believe that each deserves about equal credit, and finally, after confounding and intermingling dates, actors, and results, proceeds to evoke from the confusion which he has created a "discoverer." The answer to this presentation of the case is simple. It ignores the historical fact that the world's knowledge and possession of the practice of painless surgery, or the pro-

cess of anaesthesia (the actual discovery), began in 1846. After Morton's announcement, in October of this year, of the success of his experiments, the whole civilized world hailed the new process with welcome, recognition and immediate adoption. The practice of anaesthesia became universal. The word itself was coined to meet the new state of facts. Thus the beginnings of anaesthesia became as much an epoch in the world's history as the beginnings of the Christian religion, of vaccination, or of steam-boat travel.

Preceding this year there was no anaesthesia. Take the year 1845, for instance, as representative of the state of affairs. No American or European surgeon pretends to have administered an anaesthetic in a single case; not a single human being was benefited by any contribution up to that time made to anaesthesia; the accumulated sufferings of humanity were endured as heretofore. It is certain, then, that no such discovery existed in practice, and it is known that no written or printed claim to such a discovery was at that time in existence. A year later Dr. James Y. Simpson suggested chloroform (a popular name for another kind of ether) as a substitute for sulphuric ether. This was in 1847. In this interval, following Morton in 1846, and preceding Simpson in 1847, two *ex post facto* claimants arose who discovered in the brilliant light of Morton's success that they were discoverers. They were Jackson, who says he said "Try ether," and Wells, who, in his own words, claimed, "10 to 15" trials of laughing-gas in tooth-pulling, and whose imperfect method, by the way, was only made available in 1863. Long does not appear upon the scene until December, 1849, three full years after anaesthesia had been in common practice. But of him and his claims more later.

We are now in a position to understand the peculiar tactics of Dr. Sims, viz: to drag down and belittle the events of 1846, and magnify and bring into prominence those immediately preceding and following. Long, Wells, and Jackson are brought up on the one hand, Simpson on the other, and, naturally, Morton drops into line as a *co-laborer*. This is ingenious, but none the less at variance with the facts. Setting up the show of justice to all parties, it is robbery of all that its author thinks can with impunity be shorn from Morton. For the "labors" of Long, Wells, and Jackson had given the world nothing, (there was no anaesthesia in 1845.) and Simpson's subsequent contribution was a substitution, not a discovery. It is a curious commentary upon the fickleness of the writer's judgement that he has emphatically advocated at as many different times the claims of three of the actors thus brought forward. In 1861, following the lead of Francis, Mott, Parker, and hundreds of the most distinguished physicians of this City, he unqualifiedly supported Morton. In 1873 he was the originator of a futile attempt to create a popular breeze of interest in Wells. And now, in 1877-79, according to the same gentleman, the world is to transfer, under his guidance, its interest to Long, who, according to him, "was the first man to intentionally produce anaesthesia for surgical operations, and that this was done with sulphuric ether in 1842."

Taking his own words, "the first man to intentionally produce anaesthesia for surgical operations," we invited Dr. Sims's attention to the wide field before him for a new change of base. Collyer, Hickman, Dauriol, Esdale, and others in recent times, but preceding Long, all "intentionally produced anaesthesia for surgical operations." So also did Hallena, Denwin, and Blandia. Esdale particularly performed amputations, and operations in other severe cases, upon a great number of patients, who were under the influence of mesmerism, and later, in 1854, even addressed a memorial to the American Congress presenting his claims to the discovery of anaesthesia. These men, to say nothing of the men of earlier times, all had the intention, and like Long and Wells, partially succeeded. But, however good their intentions, they stopped short of demonstration and success. They gave the world nothing because their processes were crude, unreliable, and unaccepted.

Our second comment is as to what Long actually did do. What did he contribute in 1842, to the anæsthesia, hailed with surprise and delight, christened and adopted in 1846? Absolutely nothing. No one pretends that either he or his experiments were known to Morton, or to any claimant until 1849. He could not, as did Jackson, by mere opportunity of locality and personal acquaintance say that he had "suggested" ether. He had written nothing, published nothing; nor had his experiments spread beyond his "very contracted world," where he was "waiting for larger operations before communicating his discovery to some scientific journal," waiting during four years. Surely there was a Post Office in this "very contracted world." This apology for Long has not the ring of sincerity.

If he is justified now in making a claim to discovery, he was equally justified then. But he made no claim. The inference is clear. He attached no more importance to his attempts than did hundreds of others who about that time were led to such experiments by the facts then prevalent about mesmerism, ether frolics, and laughing gas. While he was waiting, humanity went on suffering pain. Beyond his four cases (the extent of his claim) not a human being reaped the least advantage from his discovery. He was waiting, and while he waited another makes the discovery and gives it to the world. This has often been the history of inventions and discoveries. Many minds have been on the same track; one succeeds in winning the goal, the rest then bring forward their claims, and the world for a time may confound the demonstrated fact with the uncertain experiments which attempted to demonstrate it; in short, may confound the final discovery with the preceding experiments. Judge Story says: "In a race of diligence between two inventors, he who first reduces his invention to a fixed, positive, and practical form would seem to be entitled to a priority of right to a patent therefor." "An imperfect and incomplete invention resting" * * * "in uncertain experiments, and not actually reduced to practice, is not and cannot be patentable."

Was, then, anæsthesia "reduced to a fixed positive and practical form" as a result of Long's five experiments. Clearly not. Or was it actually reduced to practice in 1842 or before 1846? All the world knows that it was not. This is exactly the class of claims, based on fruitless experiment, against which the law of the land intends to protect the discoverer. How easy after the fact of practical anæsthesia was realized to clothe the bare experiments of 1842 with the garments of the positive results of 1846, to carry back into the past the knowledge of the present.

Dr. Long, in 1842, contributed nothing new to the subject of anæsthesia, for many before him had intentionally produced insensibility to pain for surgical operations, but failed to satisfy themselves and the world that they could do so repeatedly. He established nothing; indeed, his efforts fell far short of many of his predecessors, for they published their results, subjected themselves to scientific criticism, and at least showed that they had a firm conviction of being right. But Long was silent until 1849. Here is a "discoverer" who allows his five experiments to lie fallow in his very "contracted world" for seven years, then makes a feeble claim, and remains unheard of for 28 years, to be at last at this date resurrected by an enthusiastic compatriot. "He who runs may read" such simple facts as these. We need say no more of Long and his fellow-experimenters. All honor to their intentions to establish a process—the principle had long been known—of anæsthesia. It remained for Morton to *do* what they had intended to do, viz., discover and put into available form a method of "intentionally producing anæsthesia for surgical operations" which the world could and did accept. This makes him the true discoverer.

In Boston a monument has been erected by a private citizen to commemorate the "discovery of anæsthesia." Such is the wording of the inscription. It is a falsification of the fact to write, as does Dr. Sims, that the monument has been erected "to the discoverer of anæsthesia," leaving the inference to be drawn that the absence of Dr. Morton's name is evi-

dence against his claims. Dr. Sims continues : " But no man is designated thereon by name." Clearly, the monument was erected, not to an individual, but to commemorate a great discovery. It is a suppression of the truth, furthermore, not to have quoted the words, " first proved to the world at the Massachusetts General Hospital, in Boston, October, A.D., 1846." It was of the operation which took place on this day that Prof. John C. Warren, the operator, wrote : " I hereby declare and certify that I never heard of the use of sulphuric ether, by inhalation, as a means of preventing the pain of surgical operations until it was suggested by Dr. William T. G. Morton, in the latter part of October, 1846." This operation was granted at Dr. Morton's request ; he alone, at that moment, took the whole responsibility of failure, and he administered the ether. Thus, though no name is on the monument, the date of the discovery which it commemorates refers to Morton alone.

In Mount Auburn Cemetery is another monument, erected by citizens of Boston. The discoverer of anaesthesia could ask for no more grateful acknowledgment of his services to the world than is rendered in the simple words of the inscription : " To W. T. G. Morton," * * * " Inventor and Revealer of Anæsthetic Inhalation ; before whom, in all time, surgery was agony ; by whom pain in surgery was averted and annulled ; since whom science has controlled pain."

One word more only in regard to further misstatements calculated to bring pain to the family and friends of Dr. Morton by creating a false impression in regard to his death. He did not " die half deranged in St. Luke's Hospital." His brain was clear and active up to an hour or two preceding his death, from a cerebral congestion accompanying acute rheumatic fever. He died suddenly while driving in Central Park, and was carried to St. Luke's Hospital by friends, in the hope that there was yet a chance of life.

WILLIAM J. MORTON, M.D.

Wednesday, Aug. 27, 1879.

No. 33 EAST THIRTY-THIRD STREET.

Note.—In writing the above it was supposed, on the strength of certain quotations made in Dr. Long's behalf from the text of his first publication contributed to the *Southern Medical and Surgical Journal* of December, 1849, that he had produced " Anaesthesia" in the sense in which this term would be used to-day. Access, within a few days, to this same text affords grounds for regret that this presentation of his claims should have been too implicitly accepted. Examination of his original article shows that Dr. Long did not in 1842 produce the Anaesthesia of to-day but that he later applied this term, defined and familiarized by the events of 1846, to certain crude " effects" occurring in his five experiments. In short his original article contains within its own limits full contradictions to the claim of "discoverer" lately somewhat ostentatiously bestowed upon him. We select here but one principal, of many possible, quotations, all showing that Dr. Long's friends are claiming too much for him, more than his works or his words warrant. And by his own words we must interpret him, discarding later additions to them.

With the advantage of the facts and terminology acquired during the three years of the common practice of Anaesthesia Dr. Long in 1849, thus sums up in the conclusion of his article his knowledge of the " Anaesthetic Powers of Ether."

" The result of my second experiment in Etherization was such as led me to believe that the anæsthetic state was of such short duration that ether would only be applicable in cases in which its effects could be kept up by constant inhalation during the time of the performance of the operation. Under this impression, up to January, 1847, I had not used ether in but one case in extracting teeth, and thus deprived myself of experimenting in the only class of cases which are of frequent occurrence in a country practice."

It must be kept in mind to begin with, that the above opinion derived from the results of this second experiment holds good " up to January, 1847," thus, not only covering the ground of Dr. Long's succeeding three experiments but also extending beyond the time of the beginning of universal anaesthesia, in 1846. These two sentences therefore embody Dr. Long's whole knowledge of the subject. There are two points of belief expressed in the first part of this quotation, the one fully, the second by implication and easily demonstrable from the context. These are

1st. That the anaesthetic state was of short duration,—and

2d. That "constant inhalation" was impossible.

The most cursory examination will establish this second point. It seems scarcely

credible that Dr. Long had not found out that etherization could be kept up by constant inhalation—but the following words used in describing the second experiment alluded to indicate his process so clearly that there is no room for doubt, (a) that the anaesthetic state was induced by the patient,—(voluntary inhalation), (b) that the amount of anaesthesia thus induced was all that the operator expected to get, or did get, and (c) that he did not practice "constant inhalation." Dr. Long says of this second experiment:

"In this operation the inhalation of ether ceased before the first incision was made; since that time I have invariably desired patients" (three more during three years) "when practicable to continue its inhalation during the time of the operation." Of what avail this instruction when it is known that the anaesthetic sleep abolishes volition as well as sensibility to pain, unless it were assumed that the patient's volition to continue the administration by himself of the anaesthetic was to be relied upon in obeying the instruction? The very desire implies volition on the patient's part.

But it is evident on every hand that Venable (the subject of the first two experiments) managed the anaesthetic. He says, "I stopped inhaling the ether before the operation was finished," and again of the first experiment, "I commenced inhaling the ether before the operation was commenced, and continued it until the operation was over." If Venable was not a voluntary agent in this transaction, *i. e.*, if he was etherized, how could he swear that he "continued it until the operation was over?" Dr. Long speaking of Venable's behavior during the same experiment says, "The patient continued to inhale ether during the time of the operation." This self-administration of ether by the patient, to himself, explains why the "anaesthetic state was of short duration." Under this condition, it would be short to-day—short because the patient could not keep up "a constant inhalation," *i. e.*, constant administration to himself—and it would be moreover as incomplete as short.

How incomplete Dr. Long found his process we are now in a position to judge of, from his own words in the second part of our first quotation. This sentence contains an admission disastrous to any claim set up to discovery. It shows that Dr. Long never got beyond the results established by his second experiment, viz.: An "anaesthetic state" of "short duration," induced by the patient, and incapable of maintenance by "constant inhalation." Fulfill the above conditions of Dr. Long's process and the word anaesthesia applied to the result would be a misnomer. It would not be anaesthesia as understood and practised to-day—a complete stupor—an annihilation of all sensibility as well as of consciousness,—but it would be the evanescent numbness of intoxication,—the first stage of the present anaesthesia—as inadequate then as now to the needs of surgery. Reduce the anaesthesia of to-day to this and we blot it from the world's knowledge. And Long himself recognized the impracticability of his intentions. He states that he was "under this impression," viz.: that the anaesthetic state was of short duration, etc., "up to January, 1847," three months after the practice of the real anaesthesia had become established. And he was so vividly "under this impression" that he "deprived" himself "of experimenting in the only class of cases" occurring frequently in a country practice. In other words he absolutely abandoned prosecuting his experiments because the "anaesthetic state" was of too "short duration" to be available in the extraction of teeth even, the simplest of minor surgical operations. This is nothing more nor less than abandonment of what it is now claimed that he discovered.

We leave the subject at this point to the impartial reader. Dr. Long is entitled to the highest credit for this, that he had a clear conception of the anaesthetic process, the intention of producing it, and more, attempted to accomplish it—and this by the use of ether. But further he did not go. Conception, intent, and attempt are far from constituting discovery; a final step remained and that was not Dr. Long's.

W. J. M.

